

10/527910

Rec'd PCT/PTO 14 MAR 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 March 2004 (25.03.2004)

PCT

(10) International Publication Number
WO 2004/024322 A3

(51) International Patent Classification⁷: B01J 31/24,
C07C 67/38

(21) International Application Number:
PCT/GB2003/003936

(22) International Filing Date:
10 September 2003 (10.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0221093.8 12 September 2002 (12.09.2002) GB
0228018.8 30 November 2002 (30.11.2002) GB
0309812.6 30 April 2003 (30.04.2003) GB
0316159.3 10 July 2003 (10.07.2003) GB
PCT/GB03/003419 6 August 2003 (06.08.2003) GB

(71) Applicant (for all designated States except US): LUCITE INTERNATIONAL UK LIMITED [GB/GB]; Wilton Centre, Wilton, Redcar TS10 4RF (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): EASTHAM, Graham [GB/GB]; Wilton Centre, Wilton, Redcar TS10 4RF (GB).

(74) Agents: FRITH, Richard, William et al.; Appleyard Lees, 15 Clare Road, Halifax HX1 2HY (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
6 May 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/024322 A3

(54) Title: A CATALYST SYSTEM COMPRISING A 1,2-BIS-(PHOSPHINOALKYL) FERROCENE LIGAND

(57) Abstract: A catalyst suitable for carbonylating ethylenically unsaturated compounds comprising a Group VIIIB metal or compound thereof and a metallocene.